

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1 1. (Currently Amended) A tool string for use in a well, comprising:

2 an electrical conductor;

3 an electrically-activated well tool having a switch and an electrically-activated
4 component coupled to the switch; and

5 an isolation apparatus between the electrical conductor and the well tool, the isolation
6 apparatus comprising a blocking element to enable a signal having a first electrical polarity to
7 pass through the element, and the blocking element to block a signal having a second electrical
8 polarity from reaching the switch in the well tool.

1 2. (Currently Amended) ~~The tool string of claim 1,~~ A tool string for use in a well,
2 comprising:

3 an electrical conductor;

4 an electrically-activated well tool; and

5 an isolation apparatus between the electrical conductor and the well tool, the isolation
6 apparatus comprising a blocking element to enable a signal having a first electrical polarity to
7 pass through the element, and the blocking element to block a signal having a second electrical
8 polarity from passing through the blocking element,

9 wherein the first electrical polarity is a negative polarity, and the second electrical
10 polarity is a positive polarity.

1 3. (Original) The tool string of claim 2, wherein the blocking element comprises one or
2 plural diodes.

1 4. (Original) The tool string of claim 2, wherein the isolation apparatus further comprises
2 an element to switch on in response to the signal of the first electrical polarity having a voltage
3 greater than a predetermined magnitude.

1 5. (Original) The tool string of claim 4, wherein the isolation apparatus further comprises a
2 fuse adapted to be blown by current passing through the fuse in response to the element
3 switching on.

1 6. (Original) The tool string of claim 5, wherein the element comprises a spark gap.

1 7. (Original) The tool string of claim 4, wherein the element comprises a clamp adapted to
2 conduct current in response to the signal of the first electrical polarity having the voltage greater
3 than the predetermined magnitude.

1 8. (Original) The tool string of claim 1, wherein the blocking element comprises plural
2 diodes.

1 9. (Original) The tool string of claim 1, further comprising a first switch coupled to the
2 electrical conductor,
3 the first switch activatable to enable communication of a signal from the electrical
4 conductor to the electrically-activated well tool.

1 10. (Original) The tool string of claim 9, wherein the isolation apparatus further comprises a
2 control unit to control activation of the first switch.

1 11. (Currently Amended) ~~The tool string of claim 10,~~ A tool string for use in a well,
2 comprising:
3 an electrical conductor;
4 an electrically-activated well tool;
5 an isolation apparatus between the electrical conductor and the well tool, the isolation
6 apparatus comprising a blocking element to enable a signal having a first electrical polarity to
7 pass through the element, and the blocking element to block a signal having a second electrical
8 polarity from passing through the blocking element; and
9 a first switch coupled to the electrical conductor,
10 the first switch activatable to enable communication of a signal from the electrical
11 conductor to the electrically-activated well tool,
12 wherein the isolation apparatus further comprises a control unit to control activation of
13 the first switch,
14 wherein the isolation apparatus further comprises one or more additional switches in
15 series with the first switch, the control unit to control activation of the switches.

1 12. (Currently Amended) ~~The tool string of claim 1,~~ A tool string for use in a well,
2 comprising:
3 an electrical conductor;
4 an electrically-activated well tool; and
5 an isolation apparatus between the electrical conductor and the well tool, the isolation
6 apparatus comprising a blocking element to enable a signal having a first electrical polarity to
7 pass through the element, and the blocking element to block a signal having a second electrical
8 polarity from passing through the blocking element,
9 wherein the isolation apparatus further comprises a filter to block radio frequency signals
10 from reaching the electrically-activated well tool.

1 13. (Currently Amended) ~~The tool string of claim 1, further comprising:~~ A tool string for use
2 in a well, comprising:

3 an electrical conductor;

4 an electrically-activated well tool;

5 an isolation apparatus between the electrical conductor and the well tool, the isolation
6 apparatus comprising a blocking element to enable a signal having a first electrical polarity to
7 pass through the element, and the blocking element to block a signal having a second electrical
8 polarity from passing through the blocking element; and

9 a tractor, the isolation apparatus between the tractor and the well tool.

1 14. (Original) The tool string of claim 13, wherein the tractor has a power supply, and the
2 tractor is electrically connected to the electrical conductor.

1 15. (Original) The tool string of claim 14, wherein the power supply comprises at least one
2 of an alternating current (AC) power supply and a direct current (DC) power supply.

1 16. (Cancelled)

1 17. (Currently Amended) ~~The apparatus of claim 16, further comprising~~ An apparatus to
2 isolate signaling in an electrical conduit from a downhole device, the apparatus comprising:

3 a blocking element adapted to enable a signal having a first electrical polarity to pass
4 through,

5 the blocking element adapted to block a signal having a second electrical polarity from
6 passing through the blocking element; and

7 a clamp adapted to electrically conduct in response to the signal of the first electrical
8 polarity having greater than a predetermined magnitude.

1 18. (Original) The apparatus of claim 17, wherein the clamp comprises a first spark gap.

1 19. (Original) The apparatus of claim 18, further comprising a redundant spark gap
2 connected in parallel with the first spark gap.

1 20. (Currently Amended) The apparatus of claim 17, further comprising a switch to block a
2 signal in the electrical conduit from the downhole ~~component~~ device when the switch in open.

1 21. (Currently Amended) The apparatus of claim 20, further comprising a control unit to
2 activate the switch to electrically connect the signal in the electrical conduit to the downhole
3 ~~component~~ device.

1 22. (Cancelled)

1 23. (Currently Amended) ~~The isolation assembly of claim 22, further comprising~~ An
2 isolation assembly to isolate a downhole component from electrical signaling in an electrical
3 conduit, comprising:
4 a diode to block electrical signaling in the electrical conduit having a positive polarity;
5 a switch having an open state and a closed state, the switch in the open state to block
6 electrical signaling in the electrical conduit from communicating to the downhole component,
7 and the switch in the closed state to communicate electrical signaling in the electrical conduit to
8 the downhole component; and
9 a fuse in series with the diode.

1 24. (Original) The isolation assembly of claim 23, further comprising a clamp that is adapted
2 to electrically conduct in response to electrical signaling having a negative polarity, the diode to
3 enable the electrical signaling having the negative polarity to pass through to the clamp.

1 25. (Original) The isolation assembly of claim 24, wherein conduction in the clamp causes
2 blowing of the fuse.

1 26. (Currently Amended) The isolation assembly of claim [[22]] 23, further comprising a
2 control unit to activate the switch between the open state and the closed state.

1 27. (Currently Amended) A method for use in a wellbore, comprising:
2 providing a tool string having an electrical conduit, an electrically-activated tool, and an
3 isolation assembly between the electrical conduit and the electrically-activated tool;
4 blocking electrical signaling of a first polarity with a blocking element in the isolation
5 assembly; [[and]]
6 enabling electrical signaling of a second polarity to pass through the blocking element;
7 and
8 activating a clamp to electrically conduct in response to the electrical signaling of the
9 second polarity having greater than a predetermined magnitude.

1 28. (Original) The method of claim 27, wherein blocking the electrical signaling of the first
2 polarity is performed by a diode.

1 29. (Currently Amended) The ~~isolation~~ method of claim 27, further comprising activating a
2 switch in the isolation assembly between an open state and a closed state, wherein the switch in
3 the open state blocks electrical signaling in the electrical conduit from the electrically-activated
4 tool, and the switch in the closed state enables communication of electrical signaling in the
5 electrical conduit with the electrically-activated tool.

1 30. (New) The tool string of claim 1, wherein the switch in the well tool is responsive to a
2 first address, and the isolation apparatus has a receiver responsive to a second address.

1 31. (New) The tool string of claim 1, wherein the well tool includes additional switches and
2 additionally electrically-activated components coupled to respective additional switches,
3 the blocking element to block the signal having the second electrical polarity from
4 reaching any of the switches.